



CCCACGCGTCCGCAGCTTCCCGAGGCTCCGCACCAGCCGCGCTTCTGTCCGCC
TGCAGGGCATTCCAGAAAGATGAGGATATTTGCTGTCTTTATATTCATGACCT
ACTGGCATTGCTGAACGCATTTACTGTCACGGTTCCTCAAGGACCTATATGTG
GTAGAGTATGGTAGCAATATGACAATTGAATGCAAATTCCTCAGTAGAAAAAC
AATTAGACCTGGCTGCACTAATTGTCTATTGGGAAATGGAGGATAAGAACAT
TATTCAATTTGTGCATGGAGAGGAAGACCTGAAGGTTTACGCATAGTAGCTAC
AGACAGAGGGCCCGGCTGTTGAAGGACCAGCTCTCCCTGGGAAATGCTGCAC
TTCAGATCACAGATGTGAAATTGCAGGATGCAGGGGTGTACCGCTGCATGAT
CAGCTATGGTGGTGCCGACTACAAGCGAATTACTGTGAAAGTCAATGCCCCA
TACAACAAAATCAACCAAGAATTTTGGTTGTGGATCCAGTCACCTCTGAAC
ATGAACTGACATGTCAGGCTGAGGGCTACCCCAAGGCCGAAGTCATCTGGAC
AAGCAGTGACCATCAAGTCCTGAGTGGTAAGACCACCACCACCAATTCCAAG
AGAGAGGAGAAGCTTTTCAATGTGACCAGCACACTGAGAATCAACACAACA
ACTAATGAGATTTTCTACTGCACTTTTAGGAGATTAGATCCTGAGGAAAACCA
TACAGCTGAATTGGTCATCCAGAACTACCTCTGGCACATCCTCCAAATGAA
AGGACTCACTTGGTAATTCTGGGAGCCATCTTATTATGCCTTGGTGTAGCACT
GACATTCATCTTCCGTTTAAAGAAAAGGGAGAATGATGGATGTGAAAAAATGT
GGCATCCAAGATACAACTCAAAGAAGCAAAGTGATACACATTTGGAGGAG
ACGTAATCCAGCATTGGAACCTTCTGATCTTCAAGCAGGGATTCTCAACCTGTG
GTTTAGGGGTTTCATCGGGGCTGAGCGTGACAAGAGGAAGGAATGGACCCGTG
GGATGCAGGCAATGTGGGACTTAAAAGGCCCAAGCACTGAAAATGGAACCT
GGCGAAAGCAGAGGAGGAGAATGAAGAAAGATGGAGTCAAACAGGGAGCC
TGGAGGGAGACCTTGATACTTTCAAATGCCTGAGGGGCTCATCGACGCCTGT
GACAGGGAGAAAGGATACTTCTGAACAAGGAGCCTCCAAGCAAATCATCCAT
TGCTCATCCTAGGAAGACGGGTTGAGAATCCCTAATTTGAGGGTCAGTTCCTG
CAGAAGTGCCCTTTGCCTCCACTCAATGCCTCAATTTCTTTTCTGCATGACTG
AGAGTCTCAGTGTTGGAACGGGACAGTATTTATGTATGAGTTTTCTCTATTTA
TTTTGAGTCTGTGAGGTCTTCTTGTGATGTGAGTGTGGTTGTGAATGATTTCTT
TTGAAGATATATTGTAGTAGATGTTACAATTTTGTGCGCCAACTAACTTGCT
GCTTAATGATTTGCTCACATCTAGTAAACATGGAGTATTTGTAAAGGTGCTTG
GTCTCCTCTATACTACAAGTATACATTGGAAGCATAAAGATCAAACCGTTG
GTTGCATAGGATGTCACCTTTATTTAACCCTAATACTCTGGTTGACCTAAT
CTTATTCTCAGACCTCAAGTGTCTGTGCAATATCTGTTCCATTTAAATATCAG
CTTTACAATTATGTGGTAGCCTACACACATAATCTCATTTCATCGCTGTAACC
ACCCTGTTGTGATAACCACTATTATTTTACCCATCGTACAGCTGAGGAAGCAA
ACAGATTAAGTAACTTGCCCAAACCAGTAAATAGCAGACCTCAGACTGCCAC
CCACTGTCCTTTTATAATAAATTTACAGCTATATTTTACTTTAAGCAATTCTT
TTATTCAAAAACCATTTATTAAGTGCCCTTGCAATATCAATCGCTGTGCCAGG
CATTGAATCTACAGATGTGAGCAAGACAAAGTACCTGTCCTCAAGGAGCTCA
TAGTATAATGAGGAGATTAACAAGAAAATGTATTATTACAATTTAGTCCAGT
GTCATAGCATAAGGATGATGCGAGGGGAAAACCCGAGCAGTGTTGCCAAGA
GGAGGAAATAGGCCAATGTGGTCTGGGACGGTTGGATATACTTAAACATCTT
AATAATCAGAGTAATTTTCATTTACAAAGAGAGGTCGGTACTTAAATAACC
CTGAAAAATAACACTGGAATTCCTTTTCTAGCATTATATTTATTCCTGATTGTC

FIG. 1A



CTTTGCCATATAATCTAATGCTTGTTTATATAGTGTCTGGTATTGTTTAAACAGT
TCTGTCTTTTCTATTTAAATGCCACTAAATTTTAAATTCATACCTTTCCATGAT
TCAAAATTCAAAAGATCCCATGGGAGATGGTTGGAAAATCTCCACTTCATCC
TCCAAGCCATTCAAGTTTCCTTTCCAGAAGCAACTGCTACTGCCTTTTCATTCA
TATGTTCTTCTAAAGATAGTCTACATTTGGAAATGTATGTTAAAAGCACGTAT
TTTTAAAATTTTTTTCCTAAATAGTAACACATTGTATGTCTGCTGTGTACTTTG
CTATTTTTATTTATTTTAGTGTTCCTATATAGCAGATGGAATGAATTTGAAGT
TCCCAGGGCTGAGGATCCATGCCTTCTTTGTTTCTAAGTTATCTTTCCCATAGC
TTTTCAATTATCTTTCATATGATCCAGTATATGTTAAATATGTCCTACATATACA
TTTAGACAACCACCATTTGTTAAGTATTTGCTCTAGGACAGAGTTTGGATTTG
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ATCTAGTCCTAAAAAGCAATCTTATTATTAACCTCTGTATGACAGAATCATGTC
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CTTGCAAAATCACATTTTCTTTCTGGAAATCCGGCAGTGTACCTTGACTGCT
AGCTACCCTGTGCCAGAAAAGCCTCATTGTTGTGCTTGAACCCTTGAATGCC
ACCAGCTGTCATCACTACACAGCCCTCCTAAGAGGCTTCCTGGAGGTTTCGA
GATTCAGATGCCCTGGGAGATCCCAGAGTTTCTTTCCCTCTTGGCCATATTC
TGGTGTCAATGACAAGGAGTACCTTGGCTTTGCCACATGTCAAGGCTGAAGA
AACAGTGTCTCCAACAGAGCTCCTTGTGTTATCTGTTTGTACATGTGCATTTG
TACAGTAATTGGTGTGACAGTGTTCTTTGTGTGAATTACAGGCAAGAATTGTG
GCTGAGCAAGGCACATAGTCTACTCAGTCTATTCCTAAGTCCTAACTCCTCCT
TGTGGTGTGGATTTGTAAGGCACTTTATCCCTTTTGTCTCATGTTTCATCGTA
AATGGCATAGGCAGAGATGATACCTAATTCTGCATTTGATTGTCACTTTTTGT
ACCTGCATTAATTTAATAAAAATATTCTTATTTATTTTGTACTTGGTAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIG. 1B



Signal peptide

1 MRIFAVFIEMTYWHLNNAFTVTPKDLVVEYGSNMTIECKFPVEKQLDL

*

Ig-V-like

51 AALIVYWEMEDKNI IQFVHGEEDLKVQHSSYRQRARLLKDQLSLGNAALQ

101 ITDVKLQDAGVYRCMISYGGADYKRITVKVNAPYNKINQRIILVVDPVTSE

Ig-C-like

151 HELTCAEGYPKAEVIWTSDDHQVLSGKTTTNSKREEKLFNVTSTLRIN

*

*

201 TTTNEIFYCTFRRDPREENHTAELVIPLEPLAHPNERTHLVLGAILLC

TM

*

251 LGVALTFIFRLRKGRMDVKKCGIQDTNSKKQSDTHLEET

FIG. 2A



*

B7-H1 50 VEYGSNM¹TI²E³CK⁴EP⁵VE⁶KQ⁷LD⁸LA⁹AL¹⁰LIV¹¹YW¹²EM¹³
B7-1 43 KE¹⁴V¹⁵AT¹⁶LS¹⁷CG¹⁸HN¹⁹VS²⁰-VE²¹EL²²AQ²³TRI²⁴YW²⁵QK²⁶
B7-2 30 AY²⁷FNE²⁸TAD²⁹LP³⁰CO³¹FAN³²SON³³QSL³⁴SEL³⁵V³⁶FW³⁷QD³⁸

80 ED³⁹KNI⁴⁰IQ⁴¹FV⁴²HGE⁴³ED⁴⁴-LK⁴⁵VQ⁴⁶HS⁴⁷SY⁴⁸RQ⁴⁹RA⁵⁰RL⁵¹L⁵²
68 EK⁵³KM⁵⁴VL⁵⁵TM⁵⁶MS⁵⁷GDM⁵⁸N----IW⁵⁹PE⁶⁰YK⁶¹NR⁶²TI⁶³FD⁶⁴
60 QEN⁶⁵LV⁶⁶LN⁶⁷EV⁶⁸YLG⁶⁹KE⁷⁰KF⁷¹DS⁷²VHS⁷³KY⁷⁴MG⁷⁵RT⁷⁶SF⁷⁷ED⁷⁸

*

89 KD⁷⁹QL⁸⁰SL⁸¹GNA⁸²ALO⁸³IT⁸⁴DVK⁸⁵LQ⁸⁶DAG⁸⁷VY⁸⁸RC⁸⁹MI⁹⁰SY⁹¹
95 IT⁹²----NN⁹³LS⁹⁴IV⁹⁵IL⁹⁶AL⁹⁷RP⁹⁸SDE⁹⁹GT¹⁰⁰YE¹⁰¹CV¹⁰²VL¹⁰³KK¹⁰⁴
90 S¹⁰⁵-----DS¹⁰⁶WT¹⁰⁷LR¹⁰⁸LHN¹⁰⁹LQ¹¹⁰IK¹¹¹DK¹¹²GL¹¹³YC¹¹⁴CI¹¹⁵IHH¹¹⁶

119 GG¹¹⁷AD¹¹⁸YKR¹¹⁹----IT¹²⁰VK¹²¹VN¹²²AP¹²³YN¹²⁴KIN¹²⁵QR¹²⁶IL¹²⁷VV¹²⁸
121 YE¹²⁹KDA¹³⁰FK¹³¹RE¹³²HL¹³³AE¹³⁴VT¹³⁵LS¹³⁶VKA¹³⁷DF¹³⁸PT¹³⁹PS¹⁴⁰IS¹⁴¹DF¹⁴²
115 KK¹⁴³PT¹⁴⁴GM¹⁴⁵IR¹⁴⁶IH¹⁴⁷OM¹⁴⁸NS¹⁴⁹EL¹⁵⁰SV¹⁵¹LAN¹⁵²FS¹⁵³QPE¹⁵⁴IV¹⁵⁵PI¹⁵⁶

*

145 DP¹⁵⁷VT¹⁵⁸SE¹⁵⁹HEL¹⁶⁰--TC¹⁶¹-QAE¹⁶²GYP¹⁶³KA¹⁶⁴-EVI¹⁶⁵WT¹⁶⁶SS¹⁶⁷
151 EI¹⁶⁸PT¹⁶⁹SN¹⁷⁰IRR¹⁷¹-II¹⁷²CST¹⁷³SG¹⁷⁴GF¹⁷⁵PEP¹⁷⁶-HLS¹⁷⁷WLE¹⁷⁸N¹⁷⁹
145 SN¹⁸⁰IT¹⁸¹ENV¹⁸²YIN¹⁸³LT¹⁸⁴CS¹⁸⁵SI¹⁸⁶HGY¹⁸⁷PEP¹⁸⁸KK¹⁸⁹MS¹⁹⁰VLL¹⁹¹R¹⁹²

171 DH¹⁹³Q---VLS¹⁹⁴GK¹⁹⁵TTT¹⁹⁶TNS¹⁹⁷KRE¹⁹⁸EKL¹⁹⁹FN²⁰⁰VT²⁰¹STL²⁰²
179 GE²⁰³---EL²⁰⁴NA²⁰⁵INT²⁰⁶TV²⁰⁷SQ²⁰⁸DP²⁰⁹ET²¹⁰ELY²¹¹AV²¹²SS²¹³KL²¹⁴
175 TK²¹⁵NST²¹⁶IE²¹⁷YD²¹⁸GI²¹⁹MOK²²⁰-SQ²²¹DN²²²VT²²³ELY²²⁴DVS²²⁵ISL²²⁶

*

198 RI²²⁷N---TT²²⁸NE²²⁹IF²³⁰YCT²³¹FR²³²RLD²³³PEEN²³⁴NHT²³⁵AEL²³⁶
205 DE²³⁷N---MT²³⁸TN²³⁹HS²⁴⁰FM²⁴¹CL²⁴²IY²⁴³GHL²⁴⁴RVN²⁴⁵--QTF²⁴⁶
204 SV²⁴⁷SFPD²⁴⁸VT²⁴⁹SN²⁵⁰MT²⁵¹IF²⁵²CILE²⁵³TD²⁵⁴KTRL²⁵⁵LS²⁵⁶-SPE²⁵⁷

226 VI²⁵⁸PEL²⁵⁹PLA²⁶⁰HPP²⁶¹NERT²⁶²
230 NW²⁶³NTTK²⁶⁴QEH²⁶⁵PD²⁶⁶NLL²⁶⁷
233 ST²⁶⁸ELED²⁶⁹PO²⁷⁰PP²⁷¹DHIP²⁷²

FIG. 2B

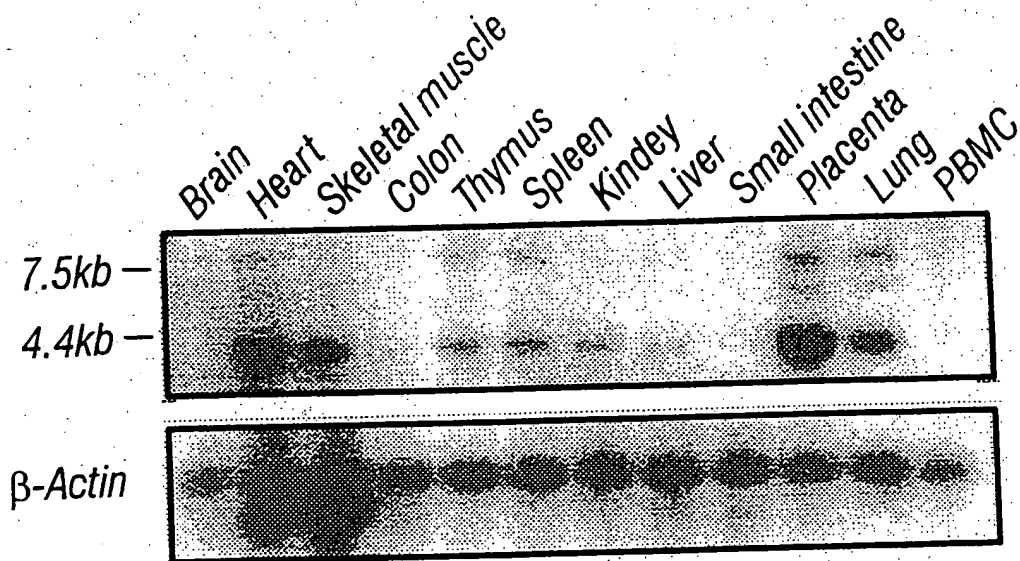


FIG. 3

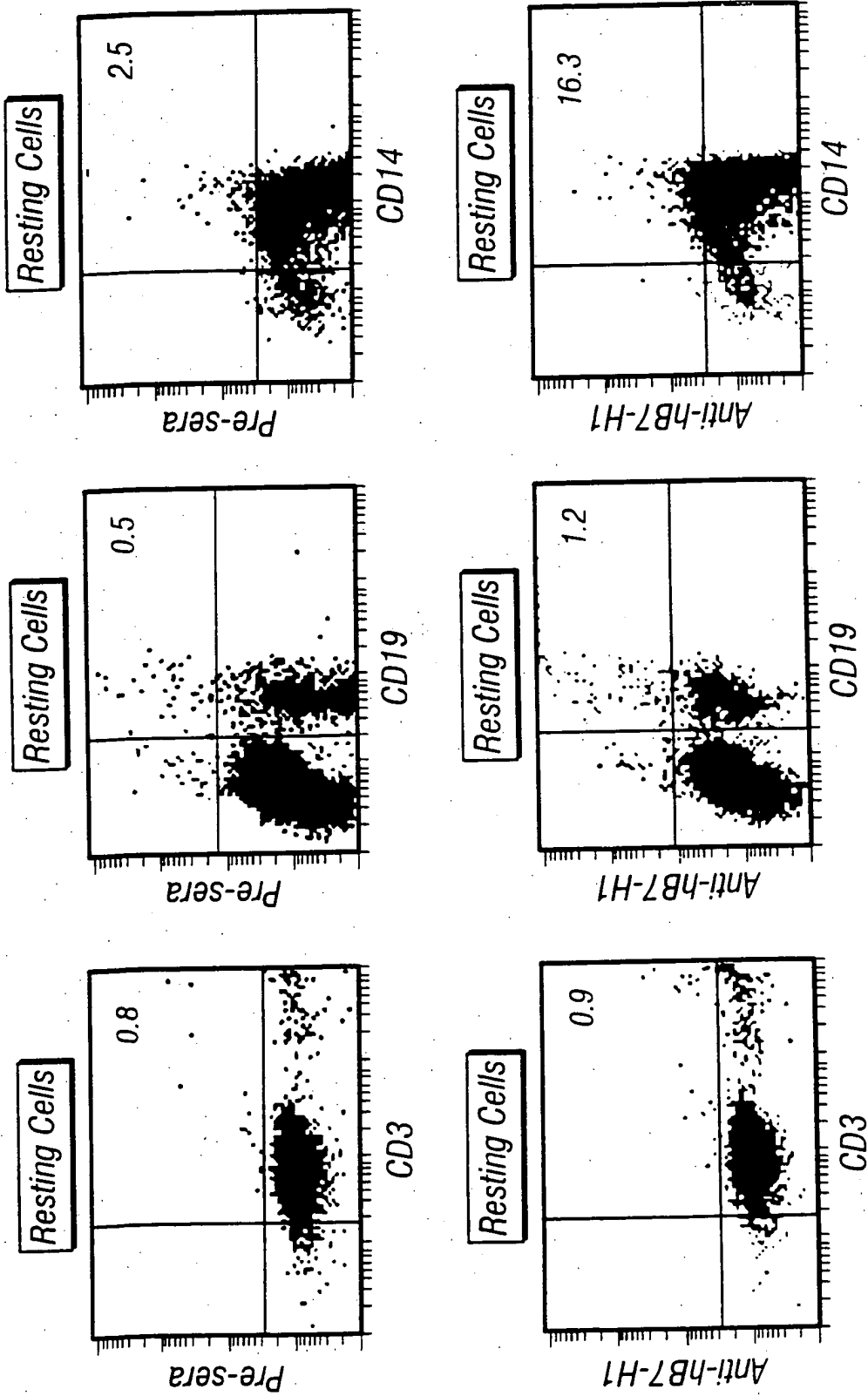


FIG. 4A

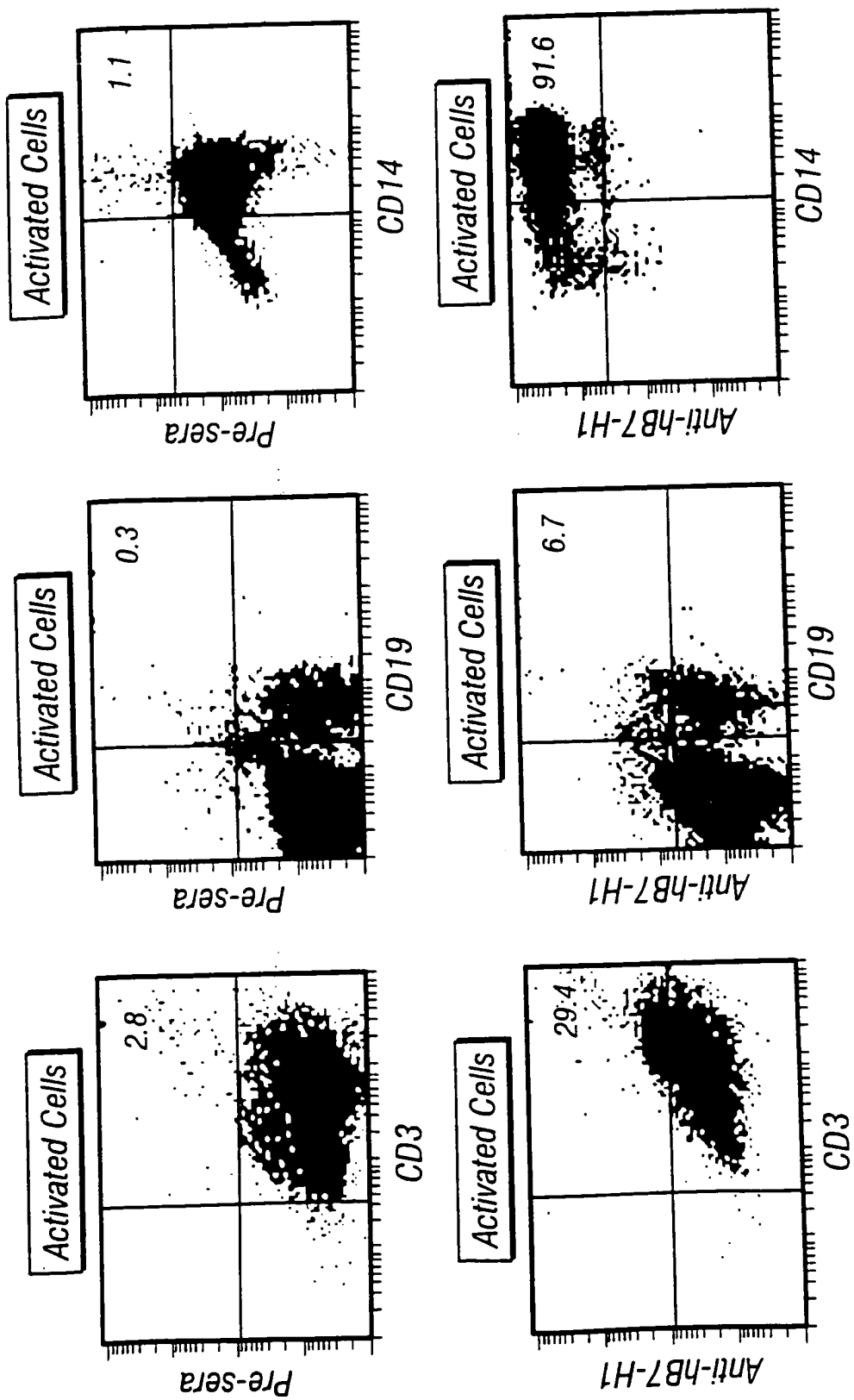


FIG. 4B

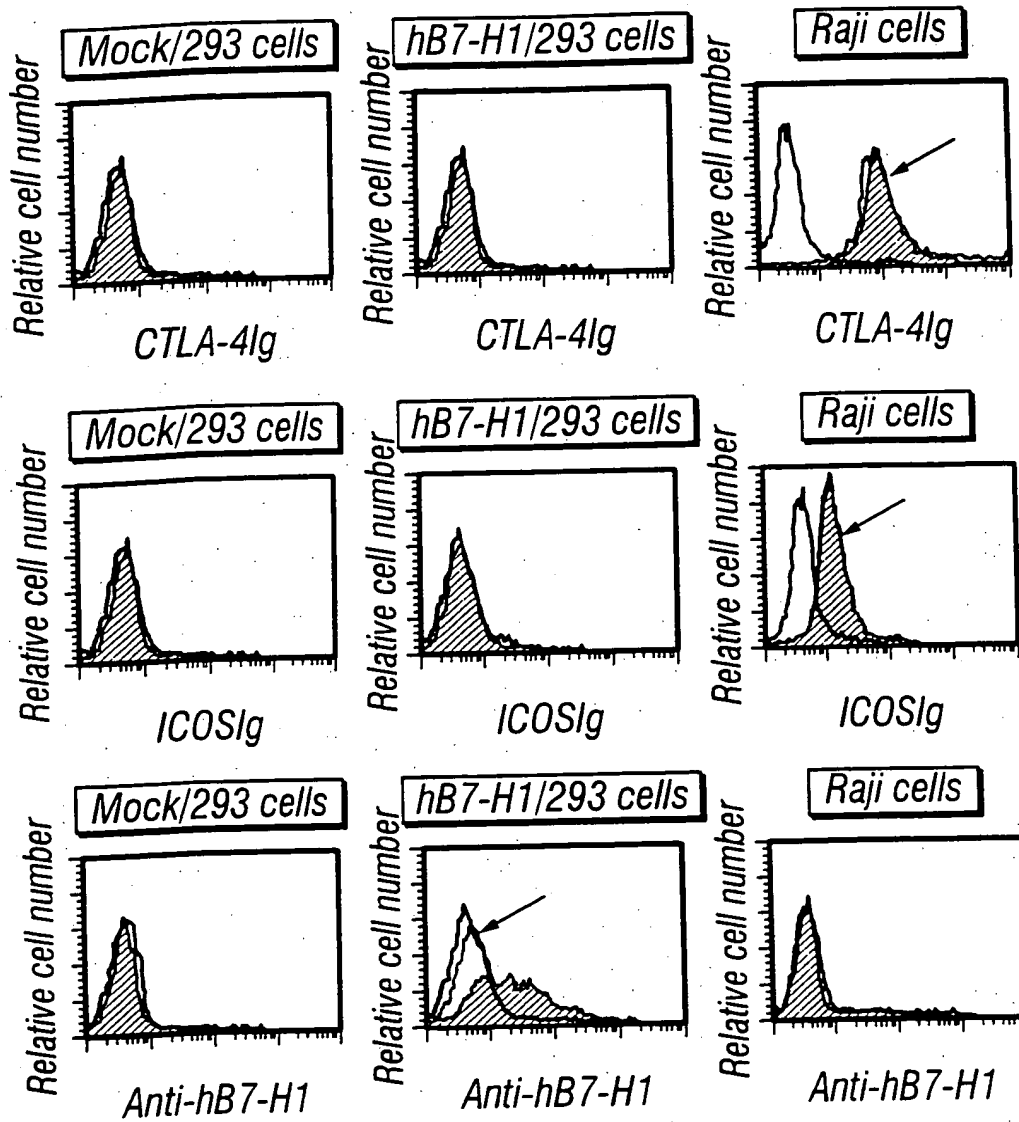


FIG. 5A

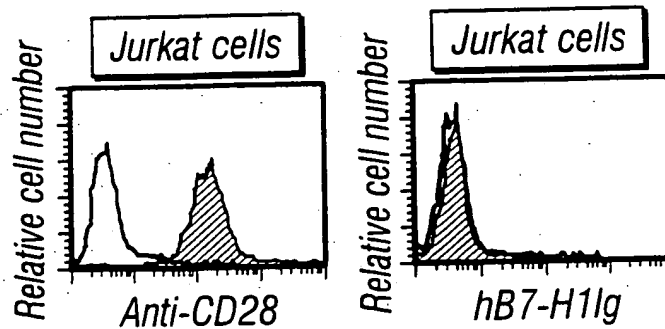


FIG. 5B

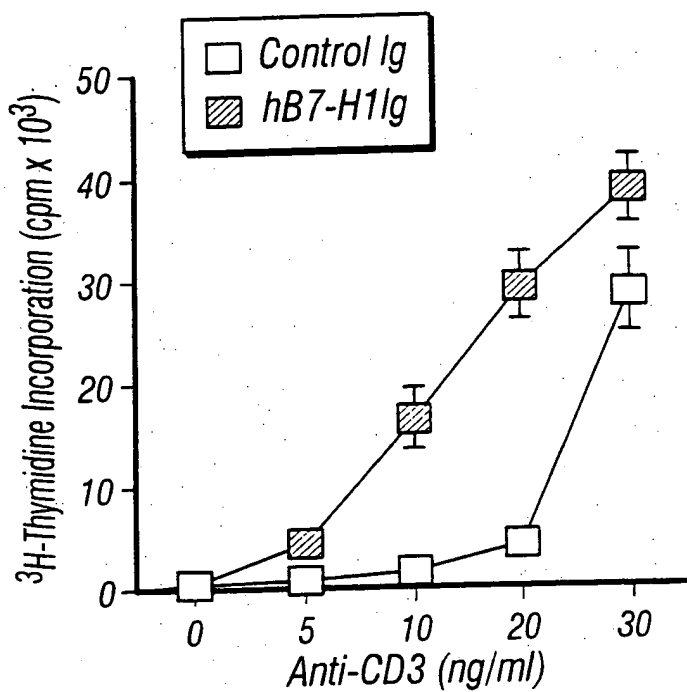


FIG. 6A

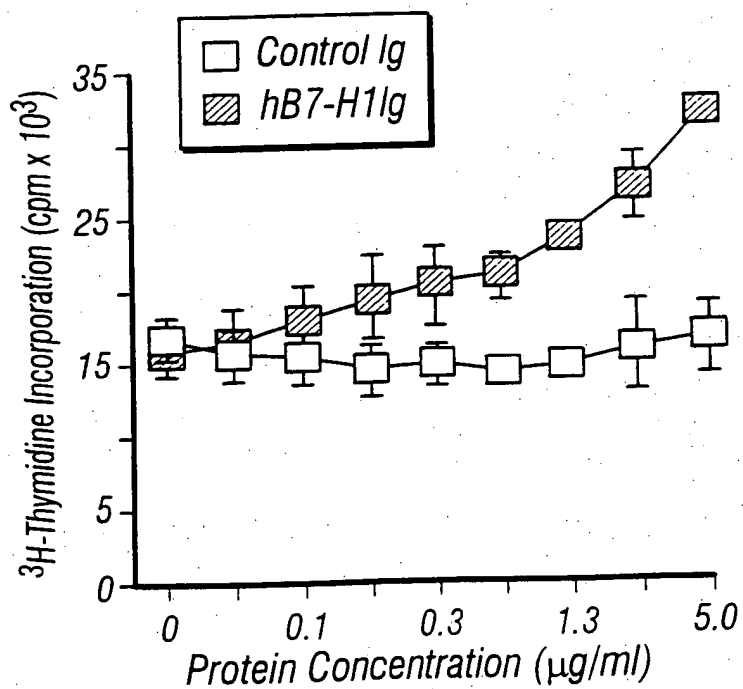
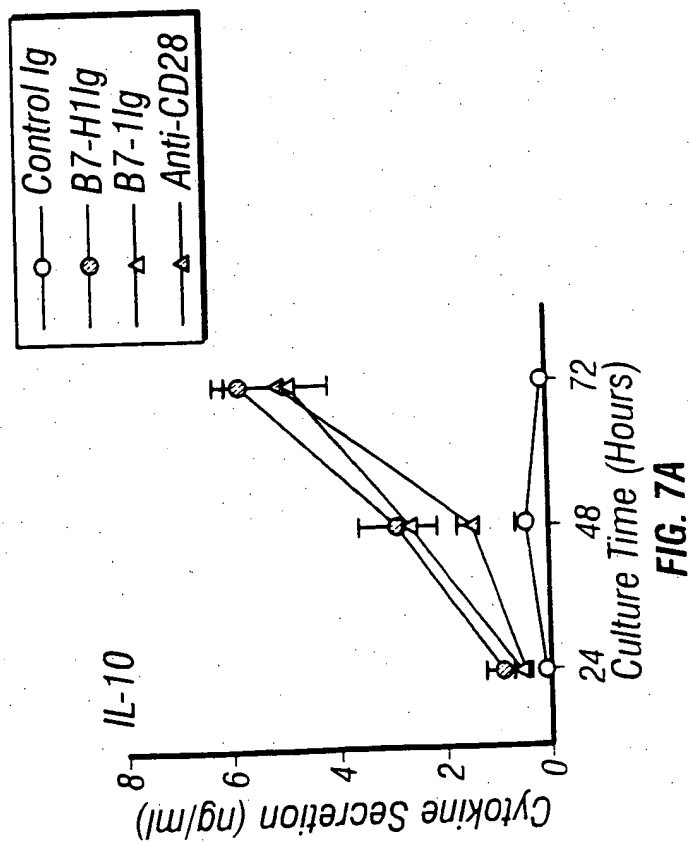
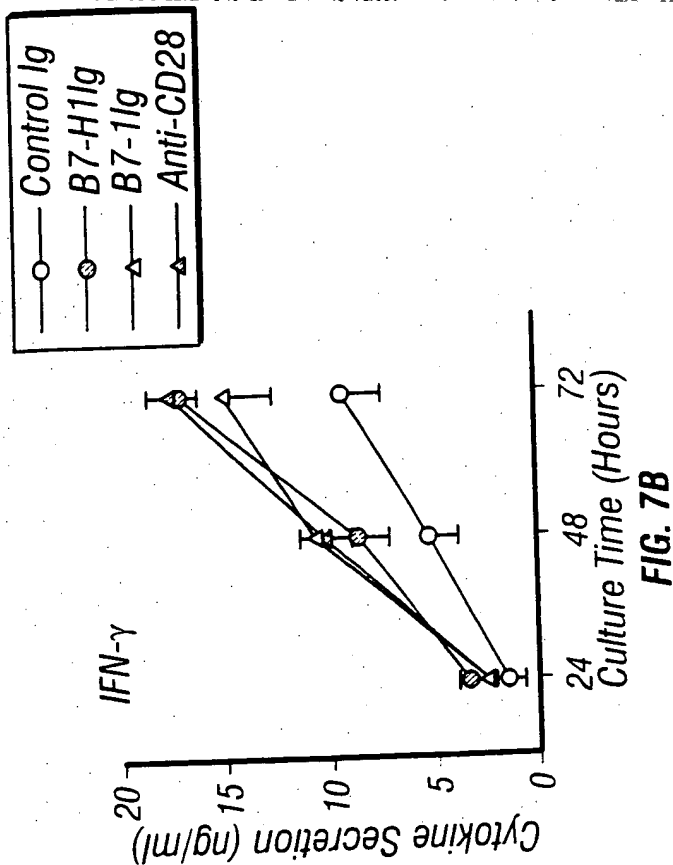


FIG. 6B



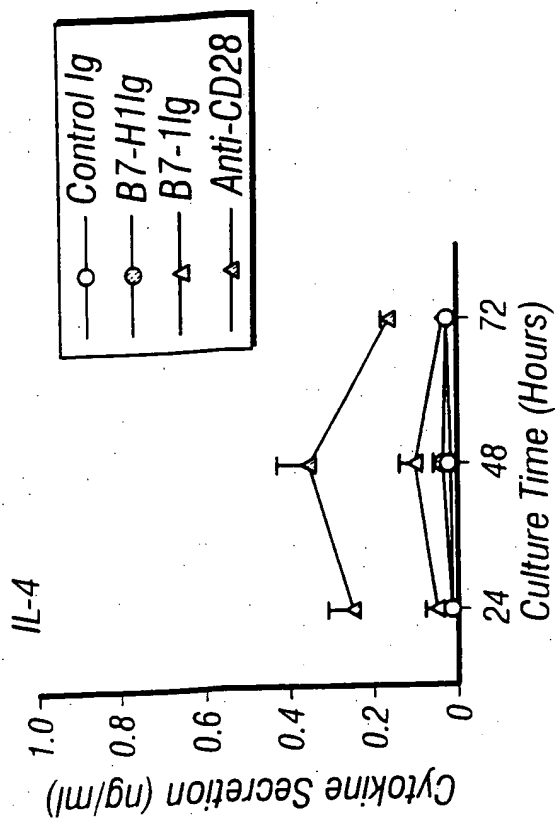


FIG. 7D

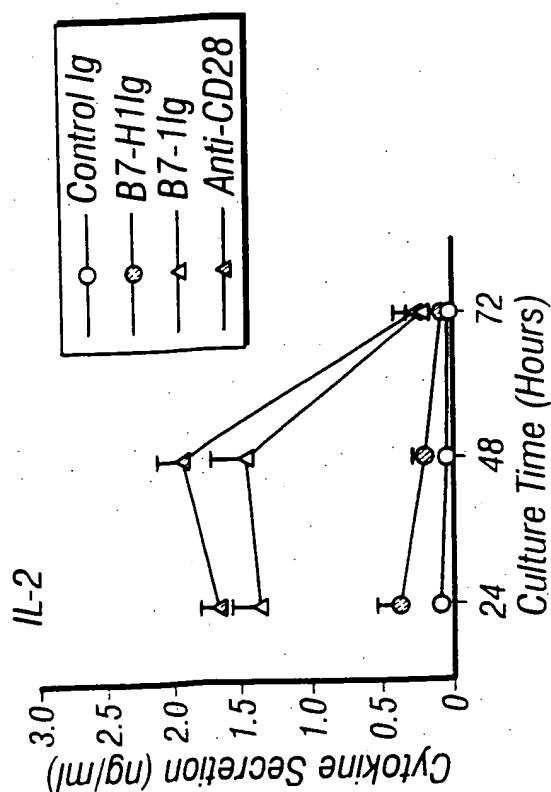


FIG. 7C

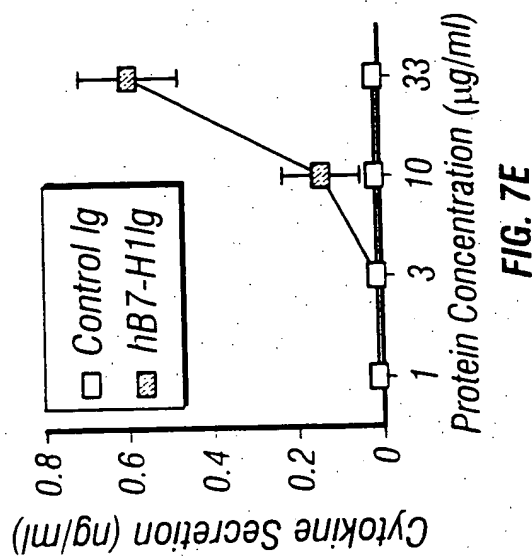


FIG. 7E

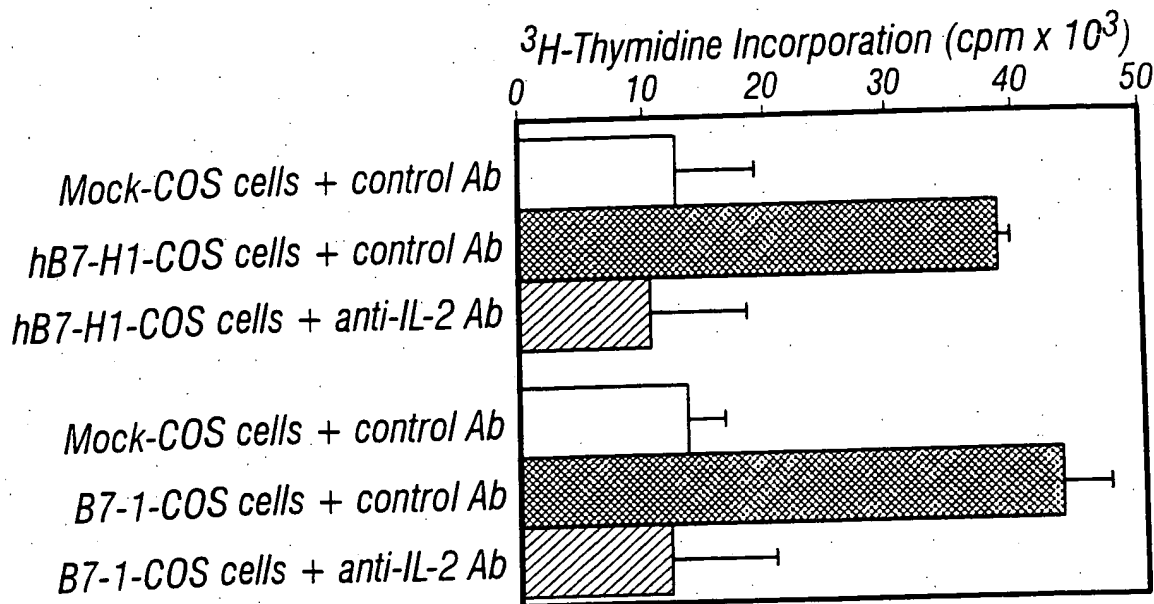


FIG. 8A

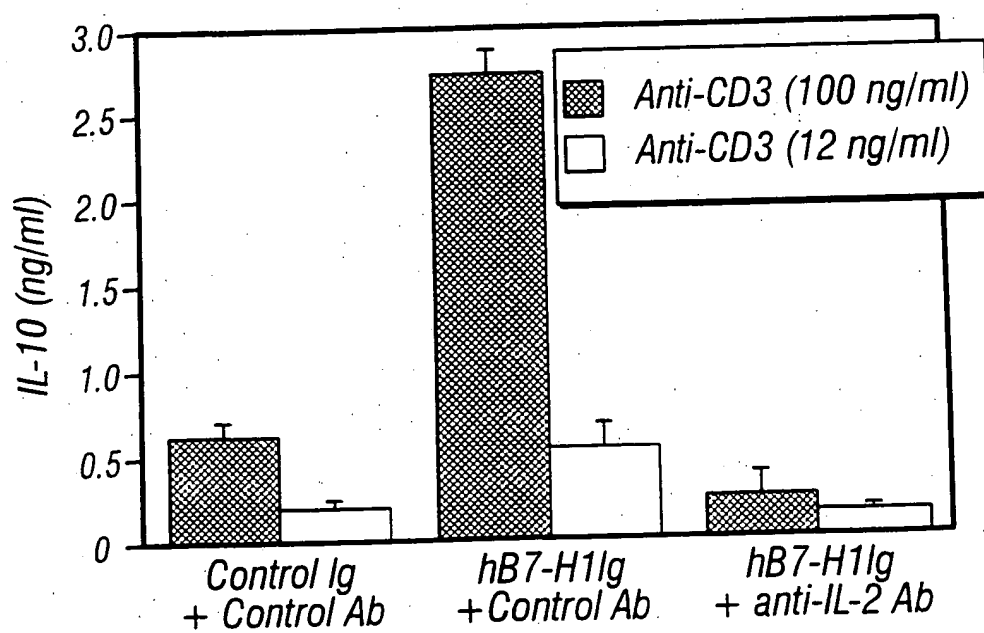


FIG. 8B

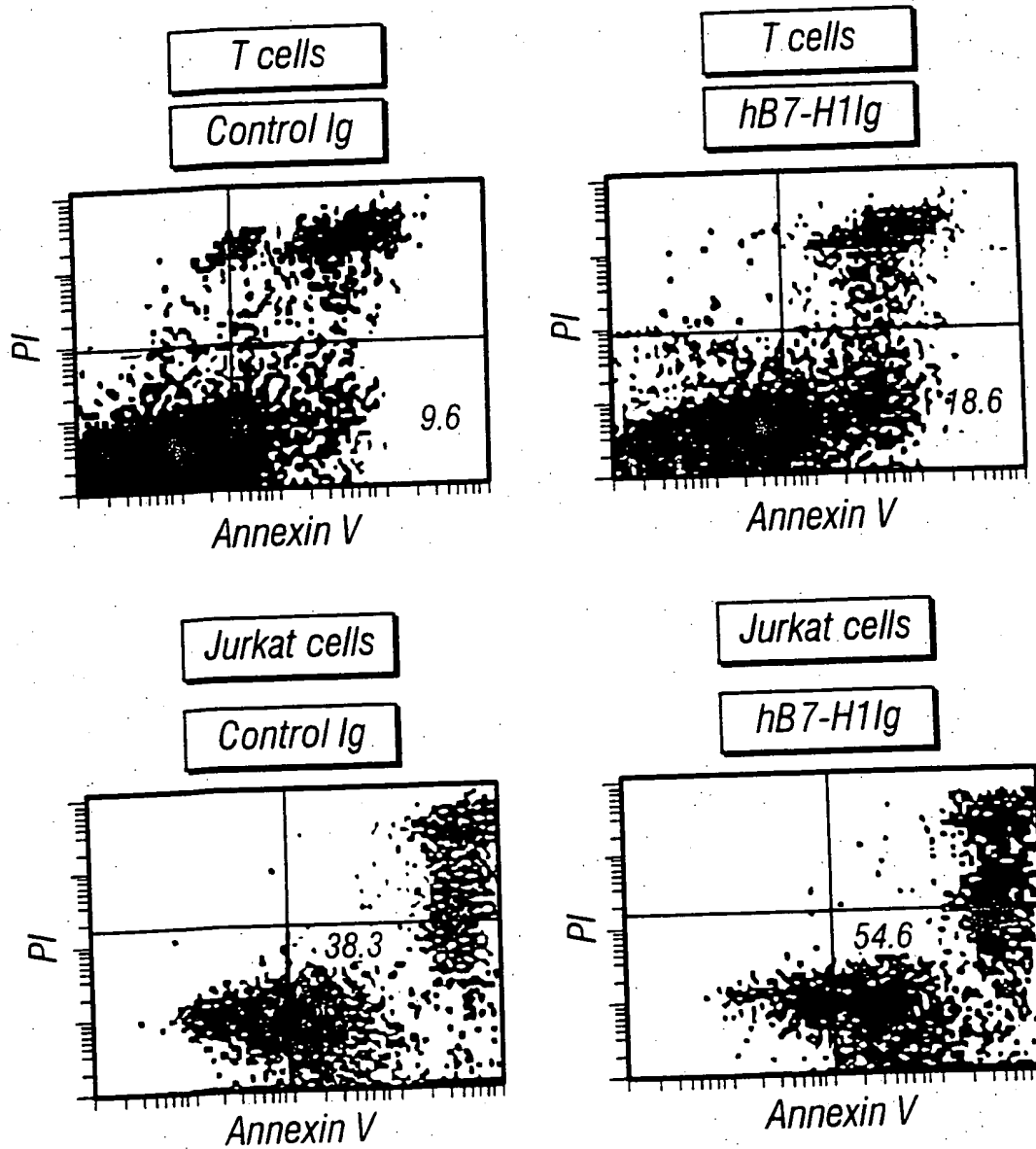


FIG. 9A

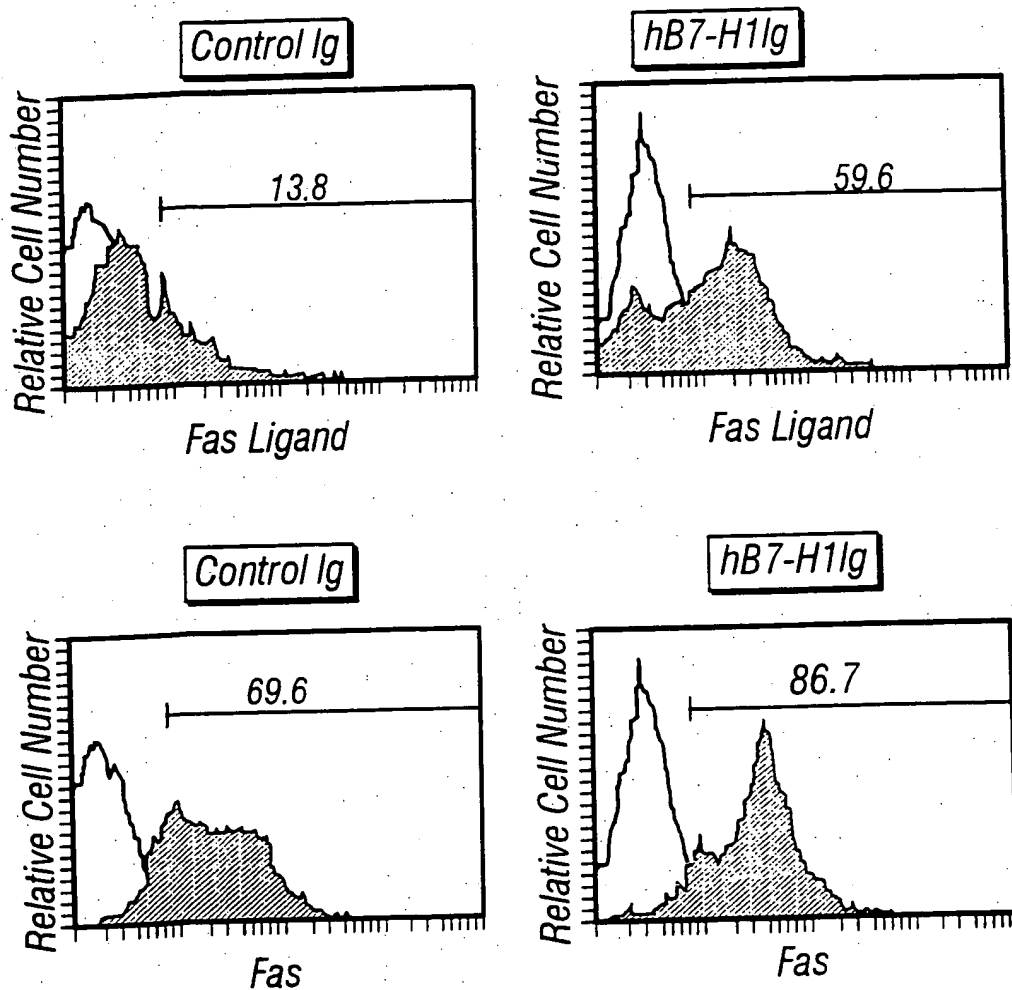


FIG. 9B



ATGAGGATATTTGCTGGCATTATATTCACAGCCTGCTGTCACTTGCTACGGGC
GTTTACTATCACGGCTCCAAAGGACTTGTACGTGGTGGAGTATGGCAGCAAC
GTCACGATGGAGTGCAGATTCCCTGTAGAACGGGAGCTGGACCTGCTTGCGT
TAGTGGTGTACTGGGAAAAGGAAGATGAGCAAGTGATTCACTTTGTGGCAGG
AGAGGAGGACCTTAAGCCTCAGCACAGCAACTTCAGGGGGAGAGCCTCGCT
GCCAAAGGACCAGCTTTTGAAGGGAAATGCTGCCCTTCAGATCACAGACGTC
AAGCTGCAGGACGCAGGCGTTTACTGCTGCATAATCAGCTACGGTGGTGCGG
ACTACAAGCGAATCACGCTGAAAGTCAATGCCCCATACCGCAAAATCAACCA
GAGAATTTCCGTGGATCCAGCCACTTCTGAGCATGAACTAATATGTCAGGCC
GAGGGTTATCCAGAAGCTGAGGTAATCTGGACAAACAGTGACCACCAACCCG
TGAGTGGAAGAGAAGTGTCACTTCCCGGACAGAGGGGATGCTTCTCAA
TGTGACCAGCAGTCTGAGGGTCAACGCCACAGCGAATGATGTTTTCTACTGT
ACGTTTTGGAGATCACAGCCAGGGCAAAACCACACAGCGGAGCTGATCATCC
CAGAACTGCCTGCAACACATCCTCCACAGAACAGGACTCACTGGGTGCTTCT
GGGATCCATCCTGTTGTTCTCATTGTAGTGTCCACGGTCCTCCTCTTCTTGAG
AAAACAAGTGAGAATGCTAGATGTGGAGAAATGTGGCGTTGAAGATACAAG
CTCAAAAACCGAAATGATACACAATTCGAGGAGACGTAA

FIG. 10

MRIFAGIIFTACCHLLRAFTITAPKDLVVEYGSNVTMECRFPVERELDLLALVV
YWEKEDEQVIQFVAGEEDLK PQHSNFRGRASLPKDQLLK GNAALQITDVKLQDA
GVYCCII SYGGADYKRITLKV NAPIRKINQRISVDPATSEHELICQAEGYPEAEVI
WTNSDHQPVSGKRSVTTSRTEGMLLNVTSSLRVNATANDVFYCTFWRSQPGQN
HTAELIPELPATHPPQNRTHWVLLGSILLFLIVVSTVLLFLRKQVRMLDVEKCGV
EDTSSKNRNDTQFEET

FIG. 11

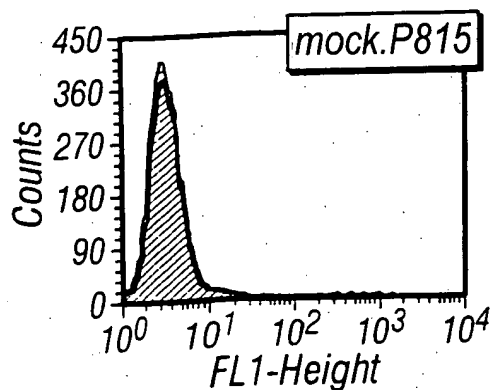


FIG. 12A

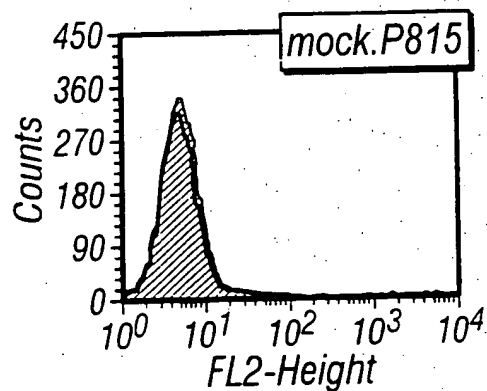


FIG. 12B

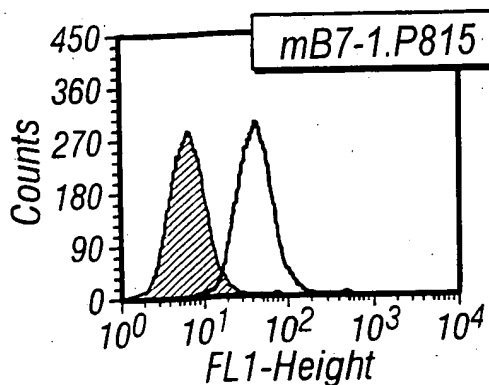


FIG. 13A

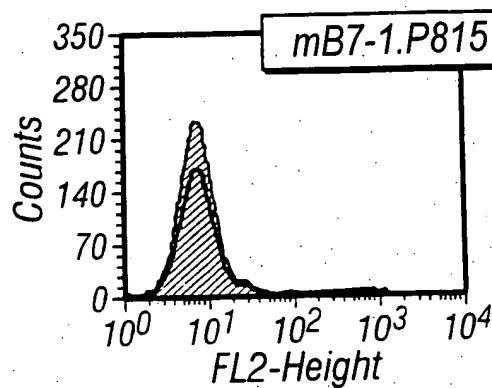


FIG. 13B

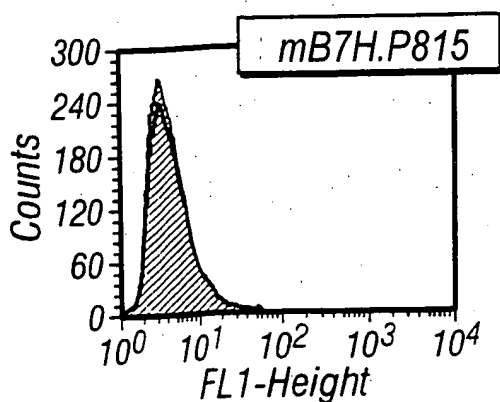


FIG. 14A

anti-mB7-1-FITC →

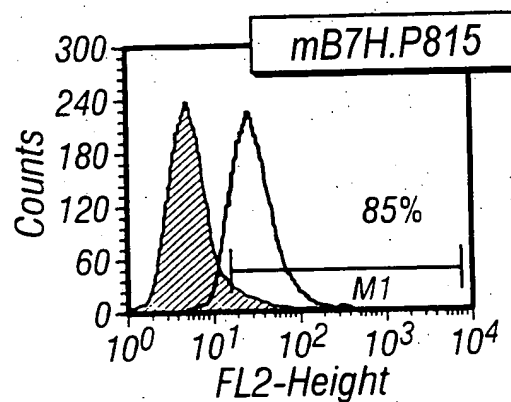


FIG. 14B

anti-mB7H/PE →

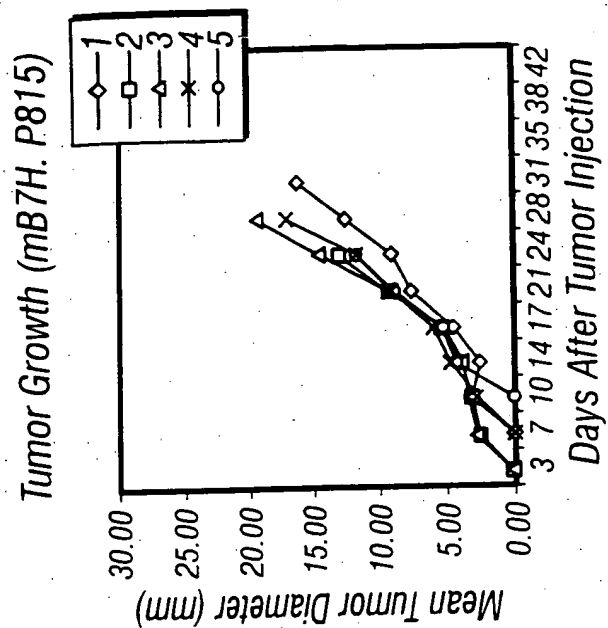


FIG. 15B

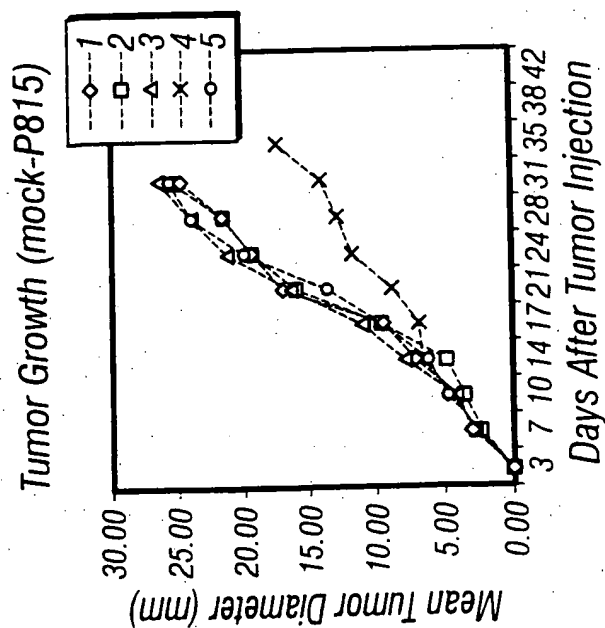


FIG. 15A